

### **REMARKS**

Claims 42-61 are pending in this application. All claims are rejected. Claims 42-61 are canceled, and new claims 62-83 are added as shown above to place the claims in better form for prosecution in the United States and to clarify what is claimed. Applicants note that new independent claim 62 incorporates the subject matter of canceled claims 42 and 59. Applicants submit that no new matter is added as support for the amendments exists in the specification and claims as originally filed.

#### **Claim Objections**

The Office Action objects to claims 57 and 45 for the reasons set forth in the Office Action at p. 2. Applicants have canceled claims 57 and 45, and respectfully request withdrawal of these objections.

#### **Rejections under 35 U.S.C. § 112, ¶ 2**

Claims 57 and 60 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. *See* Office Action at pages 2-3. Applicants have canceled claims 57 and 60 and respectfully request withdrawal of this rejection.

#### **Rejections under 35 U.S.C. § 102(b)**

The present claims are generally directed to a drilling fluid comprising a zwitterionic polymer comprising betaine units.

Samour (U.S. 3,671,502)

Claims 42-48 and 53-58 are rejected under 35 U.S.C. § 102(b) as anticipated by Samour. *See* Office Action at 4-7. Claims 42-48 and 53-58 have been canceled, and new claims reciting drilling fluids are presented. Applicants respectfully submit that Samour does not teach drilling fluids, and for at least this reason, this rejection should be withdrawn.

Nielson (U.S. 6,133,391)

Claims 42-49 are rejected under 35 U.S.C. § 102(b) as anticipated by Nielson. *See* Office Action at 7-9. Claims 42-49 have been canceled, and new claims reciting drilling fluids are presented. Applicants respectfully submit that Nielson does not teach drilling fluids, and for at least this reason, this rejection should be withdrawn.

Aubay (U.S. 2002/0065208)

Claims 42, 43, 46-52, and 57 are rejected under 35 U.S.C. § 102(b) as anticipated by Aubay. *See* Office Action at 9-11. Claims 42, 43, 46-52 and 57 have been canceled, and new claims reciting drilling fluids are presented. Applicants respectfully submit that Aubay does not teach drilling fluids, and for at least this reason, this rejection should be withdrawn.

**Rejections under 35 U.S.C. § 103(a)**

Samour

Claim 56 is rejected under 35 U.S.C. § 103(a) as obvious over Samour. *See* Office Action at 12. Claim 56 has been canceled, and related new claim 78 reciting a drilling fluid is presented. Applicants respectfully submit that Samour does not teach drilling fluids, and for at least this reason, the Office Action does not establish a *prima facie* case of obviousness. Accordingly, Applicants request withdrawal of this rejection.

Argillier (U.S. 6,410,671) in view of Samour

Claims 42, and 59-61 are rejected under 35 U.S.C. § 103(a) as obvious over Argillier in view of Samour. *See* Office Action at 13-14. According to the Office Action, Argillier teaches drilling fluid comprising zwitterionic polymers (Argillier, claim 12) derived from sulfobetaines or phosphobetaines (Argillier, claim 1) and acrylamides or acrylates. The Office Action states that Argillier teaches that its zwitterionic polymers are efficient as viscosifying agents for aqueous solutions within a wide salinity and temperature range (Argillier, col. 1, line 25-30). The Office Action acknowledges, however, that Argillier does not teach zwitterionic polymers derived from alkoxylated or hydroxylated acrylate or acrylamide. The Office Action states that, “It would have been obvious for a person of ordinary skill in the art at the time the invention was made to employ Samour’s zwitterionic polymer, within the composition of Argillier’s drilling fluid, for the benefit of a high viscosifying effect, because Samour’s polymer is also zwitterionic and can tolerate a wide salinity range.” Applicants respectfully traverse.

Applicants respectfully submit that the Office Action does not establish a *prima facie* case of obviousness, because there was no reason for one of ordinary skill in the art (*i.e.*, one of ordinary skill in the art of drilling fluids) to combine the copolymers of Samour with the drilling fluids of Argillier.

Samour teaches that its copolymers are useful as hydrophilic binders for a variety of materials where binding strength is important, such as glass, leather, plastics, steel, hides, and wood. *See* Samour at col. 1, lines 49-51 and col. 2, lines 8-19. Samour does not teach the use of its copolymers in drilling fluids, or for any application related to the petroleum drilling industry. Contrary to the statement in the Office Action quoted above, Applicants submit that Samour does not teach that its polymers can tolerate a wide salinity range. Therefore, the only reason

established by the Office Action that one of ordinary skill in drilling fluids would have substituted the copolymer of Argillier with the copolymer of Samour is that both copolymers are zwitterionic. Nevertheless, a nearly infinite number of zwitterionic copolymers exist, and Applicants respectfully submit that the mere fact that Samour discloses zwitterionic copolymers would have been insufficient reason for one of ordinary skill in the art to have selected the particular copolymers of Samour for substitution in place of the copolymers in the drilling fluid of Argillier, as now proposed with the benefit of hindsight by the Office Action. Accordingly, Applicants respectfully submit that this rejection should be withdrawn.

### CONCLUSION

An indication of allowance of all claims is respectfully solicited. In the event any issues remain, Applicants would appreciate the courtesy of a telephone call to their counsel to resolve such issues and place all claims in condition for allowance.

Respectfully submitted,

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